Notes on Unemployment Rate Assumption

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Role of unemployment in projections

- Employment = Population * LFPR * (1-UR)
  - All else the same, a lower UR means that more people are working
  - A decrease in the UR has the same effect as an increase in the LFPR
- Decreases in the unemployment rate are associated with improvements in the actuarial balance
  - Sensitivity calculations not reported in the Trustees Report, but 2011 Technical Panel Report describes effect of plausible variation in unemployment as "second order"
- Note: Assumptions in Trustees Report regarding ultimate unemployment rate refer to age-sex adjusted figures

Table 4.2: Civilian Unemployment Rates over Complete Economic Cycles (Peak to Peak)

	Total Rate	Age-Sex Adjusted Rate
Individual Cycle:		
1966-1972	4.5	3.8
1973-1978	6.6	5.5
1979-1988	7.3	6.3
1989-2000	5.6	5.1
2001-2007	5.2	5.0
Last Two Cycles		
1989-2007	5.4	5.1
Last Three Cycles		
1979-2007	6.1	5.5
Last Four Cycles		
1973-2007	6.2	5.5
Last Five Cycles		
1966-2007	5.9	5.2

Source: *The Long-Range Economic Assumptions for the 2014 Trustees Report*, OCACT, July 28, 2014 (OC

Factors considered in developing projections

- OCACT notes that, as the Baby Boomers enter retirement, the working age population will grow more slowly than in the past
  - Demographic shifts can be expected to increase the demand for older workers and draw more of them into the labor force
  - "Even with increases in labor supply from older workers, it seems likely that the increasing age-dependency ratio will exert downward pressure on the age-sex-adjusted unemployment rate." (OCACT 2014)
- OCACT also expects slower rates of increase in female labor force participation and argues this will "produce an age-sex adjusted unemployment rate below the 5.8 percent experienced over the last 40 years (1972-2012)." (OCACT 2014)

- Note: Same reasoning also could lead to expectation of higher labor force participation rate, but this is not modeled

Current assumptions regarding ultimate age-sex adjusted unemployment rate

- Range of values across the three scenarios
  - Intermediate cost: 5.5 percent, reached in 2021
  - Low cost: 4.5 percent, reached in 2020
  - High cost: 6.5 percent, reached in 2023

- Assumed values for ultimate rates have not changed since 1999
  - Each Trustees Report uses different reference year for age-sex adjustment, so same numbers mean something slightly different
  - Reduced in 1999 by 0.5 percentage point from the prior values of 6.0 percent (intermediate), 5.0 percent (low cost) and 7.0 percent (high cost)

Technical Panel Recommendations

- 2015 Technical Panel (proposed): "The Technical Panel recommends no change in the ultimate long-run unemployment rate assumed in the 2014 Trustees Report [for the intermediate cost scenario. The Panel believes, however, that the ultimate value for the unemployment rate assumed in the high cost scenario is higher than is plausible and should be reduced]."
- 2011 Technical Panel: "The Technical Panel recommends no change to the assumptions on the ultimate long-run unemployment rate in the 2011 Trustees Report."
- 2007 Technical Panel: "The Panel recommends no change to the Trustees' assumed rate of unemployment."
- 2003 Technical Panel: "The Panel recommends that the assumptions on unemployment remain the same as those in the 2003 Report. Given recent experience, a long-run unemployment rate of 5.5 percent is a reasonable assumption for future unemployment rates."